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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/03/2005

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EXAMINER

DAVIS, CYNTHIA L

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/872,289	Applicant(s) INY, OFER	
	Examiner Cynthia L. Davis	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/11/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 8-11, 16-24, 29-34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Webber in view of Headrick.

Regarding claim 8, sequentially inserting said packet into a circular first-in-first-out memory scheme and selectively associating said packets with said plurality queues is disclosed in Webber, column 3, lines 2-5. Updating queue information that links between a packet being inserted into said memory scheme and a previous packet associated with the same queue as the packet being inserted is missing from Webber. However, Headrick discloses in column 9, lines 8-9; column 10, lines 1-3; and figure 11, a memory scheme that contains sub-queues that are stored as linked lists; linked lists are stored in a manner that links a new entry with a previous entry in the queue. It would have been obvious to one skilled in the art at the time of the invention to use linked lists to store the queued packets of Webber. The motivation would be to use a well-known technique of data storage and manipulation (see, for example, Gordon, column 5, lines 62-63).

Regarding claims 9 and 22, removing said packets from said memory scheme according to said plurality queues is disclosed in Webber, column 3, lines 5-7.

Regarding claim 10, said plurality of queues comprises a plurality of independent first-in-first-out queues is disclosed in column 2, lines 49-50 (the sets act as independent fifos).

Regarding claims 11 and 24, sequentially inserting said packets comprises: inserting a start of a packet at a memory word indicated by a write pointer, and advancing said write pointer to indicate a memory word located after a memory word containing an end of said packet is disclosed in column 6, lines 22-27 (disclosing operations using the tail pointer that write the packet and advance the pointer into the queue).

Regarding claims 16 and 29, wherein said associating comprises updating a linking pointer associated with said pervious packet to identify a location of a packet being inserted is missing from Webber. However, Headrick discloses in column 10, lines 1-3, and figure 11, a memory scheme that contains sub-queues that are stored as linked lists; linked lists are stored in a manner that links a new entry with a previous entry via a linking pointer in the queue. It would have been obvious to one skilled in the art at the time of the invention to use linked lists to store the queued packets of Webber. The motivation would be to use a well-known technique of data storage and manipulation (see, for example, Gordon, column 5, lines 62-63).

Regarding claims 17 and 30, identifying said previous packet based on a tail pointer corresponding to the queue with the packet being inserted is missing from

Art Unit: 2665

Webber. However, Headrick discloses in column 10, lines 18-21, using tail pointers to manage a queue that is stored as a linked list. It would have been obvious to one skilled in the art at the time of the invention to use linked lists to store the queued packets of Webber. The motivation would be to use a well-known technique of data storage and manipulation (see, for example, Gordon, column 5, lines 62-63).

Regarding claims 18 and 31, managing a plurality of header pointers identifying the beginning of said plurality of queues is missing from Webber. However, Headrick discloses in column 10, lines 18-21, using header pointers to manage a queue that is stored as a linked list. It would have been obvious to one skilled in the art at the time of the invention to use linked lists to store the queued packets of Webber. The motivation would be to use a well-known technique of data storage and manipulation (see, for example, Gordon, column 5, lines 62-63).

Regarding claims 19 and 32, comprises updating one or more values corresponding to at least one of a header pointer of a queue, a tail pointer of said queue, and a link pointer linking between two consecutive packets of said queue is disclosed in column 5, lines 56 and 58-9.

Regarding claims 20 and 33, a capacity of said memory scheme is predetermined based on an expected rate for receiving said packets into said memory scheme is disclosed in Webber, column 6, lines 32-47 (disclosing a dequeuing operation that occurs continuously over the entire fifo in order to deliver the packets to their intended recipients at a desired rate and clear the memory for incoming packets).

Regarding claim 21, a system for managing a plurality of queues of received packets, the system comprising: a circular first-in-first-out memory scheme to sequentially store said packets, and a memory manager able to associate said packets with said plurality of queues is disclosed in Webber, column 3, lines 2-5. Updating queue information that links between a packet being inserted into said memory scheme and a previous packet associated with the same queue as the packet being inserted is missing from Webber. However, Headrick discloses in column 9, lines 8-9; column 10, lines 1-3; and figure 11, a memory scheme that contains sub-queues that are stored as linked lists; linked lists are stored in a manner that links a new entry with a previous entry in the queue. It would have been obvious to one skilled in the art at the time of the invention to use linked lists to store the queued packets of Webber. The motivation would be to use a well-known technique of data storage and manipulation (see, for example, Gordon, column 5, lines 62-63).

Regarding claim 23, said plurality of queues comprises a plurality of first-in-first-out queues is disclosed in column 2, lines 49-50 (the sets act as fifos).

Regarding claim 34, said removing comprises removing a packet identified by a header pointer of a queue, and updating said header pointer to identify a successive packet which is linked to the packet being removed is missing from Webber. However, Headrick discloses in column 10, lines 18-21, that header pointers are updated when an element is read out of the queue. It would have been obvious to one skilled in the art at the time of the invention to update the header pointer when reading a packet out of the

Art Unit: 2665

queue of Webber. The motivation would be to have the header indicate the current status of the queue.

Regarding claim 37, said memory manager is able to remove a packet identified by a header pointer of a queue, and update said header pointer to identify a successive packet which is linked to the packet being removed is missing from Webber. However, Headrick discloses in column 10, lines 18-21, that header pointers are updated when an element is read out of the queue. It would have been obvious to one skilled in the art at the time of the invention to update the header pointer when removing a packet from of the queue of Webber. The motivation would be to have the header indicate the current status of the queue.

3. Claims 12-15, 25-28, 35-36 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Webber in view of Gallup.

Regarding claims 12 and 25, sequentially inserting said packets comprises advancing a delete pointer jointly with said write pointer is disclosed in Webber, column 6, lines 32-47 (disclosing a dequeuing operation that occurs continuously over the entire fifo). An empty zone of a predetermined length is maintained between said write pointer and said delete pointer is missing from Webber. However, Gallup discloses in figure 2-59, and column 47, lines 8-12 (the global pointers are padded with empty space). It would have been obvious to one skilled in the art at the time of the invention to have an empty zone between the global pointers. The motivation would be to allow for future growth in the memory.

Regarding claims 13 and 26, dropping an indicated packet corresponding to a memory word indicated by said delete pointer, if said indicated packet is linked to one of said plurality of queues is disclosed in Webber, column 6, lines 32-47 (disclosing dequeuing) and column 8, lines 47-50 (disclosing dequeuing from specific sets).

Regarding claims 14 and 27, determining if said indicated packet is linked to one of said plurality of queues by comparing a location of the memory word indicated by said delete pointer to a location indicated by a head pointer of a queue associated with said memory word is disclosed in Webber, column 6, lines 32-47 (disclosing dequeuing) and column 8, lines 29-32 (disclosing determining which set the zero packet belongs to).

Regarding claims 15 and 28, determining a queue associated with said memory word based on information associating between a plurality of memory words and said plurality of queues is disclosed in column 9, lines 8-11 (disclosing checking as many packets belonging to as many sets as necessary to find the right set identifier, or memory word).

Regarding claim 35, dropping said indicated packet comprises updating a header pointer of a queue associated with said indicated packet to identify a successive packet, which is linked to said indicated packet is missing from Webber. However, Headrick discloses in column 10, lines 18-21, that header pointers are updated when an element is read out of the queue. It would have been obvious to one skilled in the art at the time of the invention to update the header pointer when removing a packet from of the queue

of Webber. The motivation would be to have the header indicate the current status of the queue.

Regarding claim 36, dropping said indicated packet comprises dropping an oldest packet stored in said memory is disclosed in Webber, column 3, line 1 (the queue is a fifo, which means first in, first out, so the head of the list would be the first in, which would be the oldest packet currently in the queue).

Regarding claim 38, said memory manager is able to update a header pointer of a queue associated with said indicated packet to identify a successive packet, which is linked to said indicated packet is missing from Webber. However, Headrick discloses in column 10, lines 18-21, that header pointers are updated when an element is read out of the queue. It would have been obvious to one skilled in the art at the time of the invention to update the header pointer when removing a packet from of the queue of Webber. The motivation would be to have the header indicate the current status of the queue.

Regarding claim 39, said indicated packet comprises an oldest packet stored in said memory is disclosed in Webber, column 3, line 1 (the queue is a fifo, which means first in, first out, so the head of the list would be the first in, which would be the oldest packet currently in the queue).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L. Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

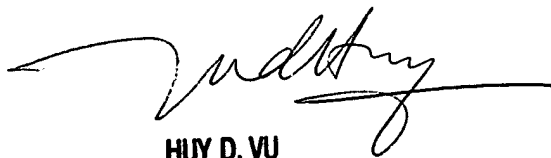
Art Unit: 2665

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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10/28/2005

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